

REMARKS

Summary of the Office Action

Claims 1-5, 7-9, 11-16 and 19-30 are pending in the application.

Claims 15 and 16 are allowed.

Claims 1-5, 7-9, 11-14, 19, 21-25 and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Vook et al. (U.S. Patent 5,583,866, hereinafter “Vook”) in view of Omi et al. (U.S. Patent 6,940,831, hereinafter “Omi”).

Claims 20 and 26-29 are objected to as being dependent upon a rejected claim, but would be allowable if rewritten in independent from.

Firstly, Applicants have thankfully received the Office Action dated July 27, 2006 in which the Examiner allows claims 15 and 16, and also places claims 20 and 26-29 in the position of allowance providing that they are rewritten in conformity with the Examiner’s suggestion. However, Applicants respectfully request further reconsideration and allowance of the rejected claims, in view of the following remarks.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-5, 7-9, 11-14, 19, 21-25 and 30 are rejected under 35 U.S.C. § 103(a) as being obvious over Vook in view of Omi. Applicants respectfully traverse these rejections.

Generally, Vook discloses a method in which a user device schedules periods of time during which it is enabled and disabled respectively, wherein the indicator of the devices is provided and data is transmitted to more than one user device simultaneously.

However, Vook does not disclose a method for effectively giving a transmission chance according to the priority of a slave device, as described in an exemplary embodiment of the present invention which supports the claims. That is, it is not disclosed in Vook that (1) a master device receives a priority request of a slave device and decides the priority, (2) a memory of the master device stores the number of communications given to the respective slave devices, and (3) a transmission chance is given to the slave devices according to the priority and the number of communications.

In Omi, on the other hand, a master device performs a complicated scheduling process using the data traffic parameter such as CBR, VBR, ABR, UBR and the like chosen for slave devices, informing the slave devices by sending out a band assignment packet containing a transmission probability parameter, possible transmission time, and possible amount of transmission, and accordingly determines transmission chance for the slave devices based on the probability.

Thus, there is a possibility that the slave devices do not have a chance to transmit data at a suitable time and in an appropriate amount. That is, Omi does not disclose that (1) a master device receives requests from the slave devices and allocates high, medium and low priority to the requests, (2) a memory of the master device stores the number of communications given to each slave device, and (3) a transmission chance is sequentially given to the slave devices accurately according to their priority and the number of transmissions made.

Therefore, Applicant respectfully submits that claims 1-5, 7-9, 11-14, 19, 21-25 and 30 are patentable over Vook in view of Omi, based on the following detailed comments.

Claim 1 recites:

a transceiving unit for receiving and transmitting data externally, the transceiving unit maintaining a link to at least one slave device and receiving a requested priority from the at least one slave device, when the wireless communication apparatus is operated as a master;

a controller for determining a priority of the at least one slave device considering the requested priority, determining a frequency of communication according to the priority of the at least one slave device and controlling the communication with the at least one slave device; and

a memory for storing the frequency of communication of the at least one slave device.

As discussed above, Vook fails to teach or suggest the technical features described in claim 1, that is, (1) a transceiving unit receives a requested priority from a slave device, (2) a controller determines a priority of the slave device considering the requested priority, (3) the controller determines a frequency of communication according to the priority of the slave device, and (4) a memory stores the frequency of communication of the slave device.

More specifically, the Examiner readily admits in the Office Action that Vook does not disclose “receiving a requested priority according to the amount of data to be transmitted to the master device from the at least one slave device and a memory for storing the frequency of communication of the at least one slave device” (see page 6 of the Office Action).

Furthermore, the priority of the devices in Vook is not determined by the access point 14 considering a requested priority of slave devices. Instead, Vook discloses determination of

priority by whether or not the device is currently transmitting (see generally col. 7, line 34 to col. 8, line 30 referring to Fig. 3).

Vook also does not teach determining a frequency of communication according to the priority of the at least one slave device, as recited in claim 1. Instead, Vook discloses that P-persistence values are assigned to devices and may vary depending upon device status, with currently transmitting devices being assigned a higher status (higher P-persistence value) which are more likely to gain access to an idle channel (col. 15, line 66 to col. 16, line 36). Thus, Vook only teaches that this status defined by the P-persistence value defines a probability of gaining access, and not a frequency of communication. The Examiner points to col. 7, line 34 to col. 8, line 30 and Fig. 3 of Vook for teaching this technical feature, but the cited excerpt does not indicate that the frequency of communication is determined according to the priority of the slave device.

Additionally, Vook discloses that the device 12 will tune to the selected access point 14 at the channel frequency (Hz) upon which a beacon in question was received. Vook's mere disclosure of tuning to a received channel frequency fails to teach or suggest using a received priority request to determine a priority and then determining the frequency of communication using the determined priority.

Omi also does not teach or suggest receiving a request priority from a slave device, determining a priority of the slave device considering the requested priority, determining a frequency of communication according to the priority of the slave device, and storing the frequency of communication of the slave device.

Omi discloses the assigning of transmission bands according to a state of data transmission. In Omi, a master station has a scheduler for determining a transmission band assignment including information about the transmission timing of the data and a transmission amount, and a receiving station gives information about a state of data receiving to the master station, where the scheduler reflects this on scheduling (see Abstract).

However, even though Omi teaches that the scheduler of the master station carries out transmission band assignment according to an order in which the communication link has been set or a priority order of the priority parameter included in the communication parameter, there is no suggestion in Omi for determining priority of slave device considering the requested priority because Omi's assignments are made directly from the received priority parameter (see col. 4, lines 43-48).

In addition, although, in Omi, the scheduler determines a timing of packet transmission, a time of transmission is also stored, and transmission time, transmission amount, and data occurrence period may be known, none of these variables suggest a determination and storing of a frequency of communication, as claimed in claim 1. Thus, Omi does not teach determining a frequency of communication according to the determined priority and storing the determined frequency of communication in a memory.

Accordingly, since neither Vook nor Omi teaches or suggests the features described in claim 1, it is not obvious for a person of ordinary skill in the art to reach the invention described in claim 1 even by combining Vook and Omi.

Claims 2-5, 7, 19, 21-25 and 30 also cannot be regarded as being obvious from Vook in view of Omi, and are allowable at least because of their dependency from claim 1.

Claim 8 recites:

the at least one slave device transmitting a requested priority to the master device, and the master device receiving the requested priority from the at least one slave device, and determining and assigning the at least one slave device with a priority considering the requested priority,

wherein the at least one slave device transmits the requested priority according to the amount of data to be transmitted to the master device.

Referring to the above analysis in part with respect to claim 1, both Vook and Omi fail to teach or suggest the technical features described in claim 8: (1) a master device receives the requested priority from at least one slave device, and (2) the master determines and assigns the at least one slave device with a priority considering the requested priority.

In addition, Vook does not teach that (3) at least one slave device transmits the requested priority according to the amount of data to be transmitted to the master device, as the Examiner admits in the Office Action (see page 6). Instead, the Examiner relies on Omi for teaching this technical feature, but Omi also does not teach the slave device's transmitting the requested priority according to the amount of data to be transmitted to the master device, as recited in claim 8.

More specifically, in Omi, a slave station provides a communication parameter with a priority parameter to the master station (col. 4, lines 47-48), however, this priority parameter does not have any relationship to an amount of data to be transmitted. Even though Omi discusses calculating a data amount parameter indicating an amount of data to be transmitted (col. 3, lines 55-56), the priority parameter in Omi is not transmitted according to this data amount parameter.

Accordingly, since neither Vook nor Omi teaches or suggests the features described in claim 8, it is not obvious for a person of ordinary skill in the art to reach the invention described in claim 8 even by combining Vook and Omi.

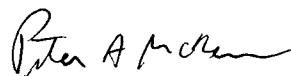
Claims 9 and 11-14 also cannot be regarded as being obvious from Vook in view of Omi, and are allowable at least because of their dependency from claim 8.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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